



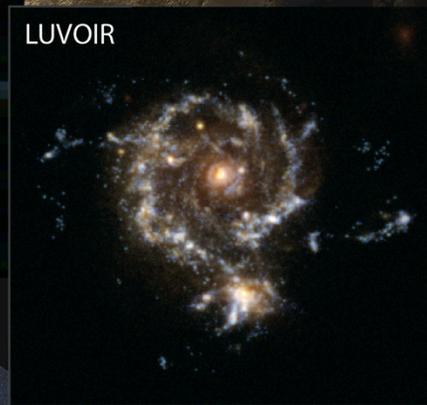
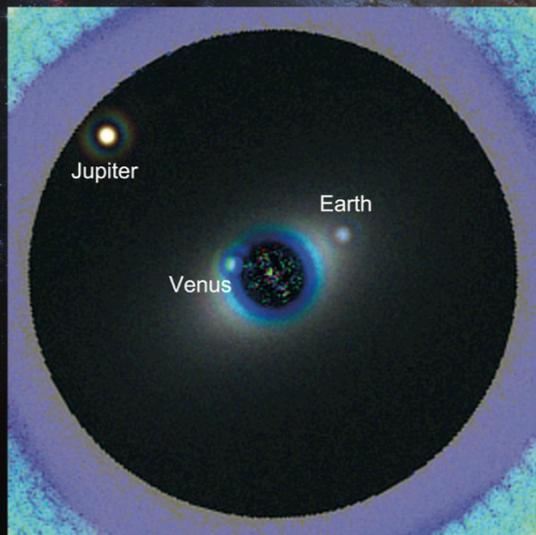
# LUVOIR

## Large Ultraviolet / Optical / Infrared Surveyor

LUVOIR is a concept for a highly capable, multi-wavelength observatory with ambitious science goals. This mission would enable great leaps forward in a broad range of astrophysics, from the epoch of reionization, through galaxy formation and evolution, to star and planet formation. Powerful remote sensing observations of Solar System bodies will also be possible. LUVOIR will study a wide range of exoplanets in depth, including those that might be habitable – or even inhabited.

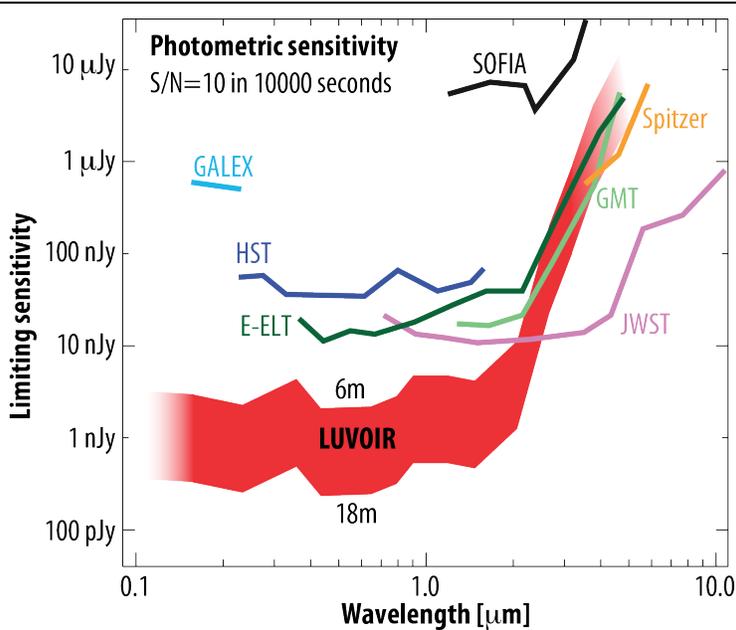


Simulated high-contrast image of the Solar System at 10 parsecs

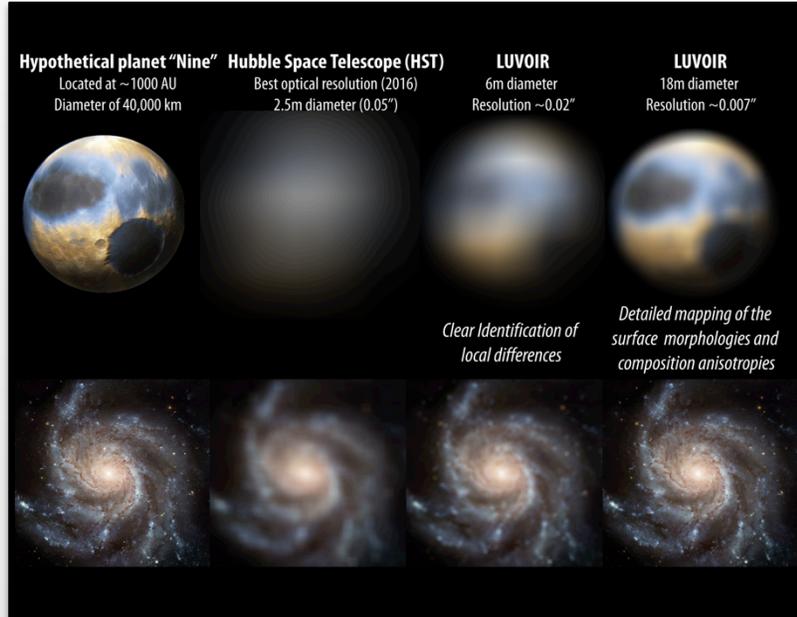


An extraordinarily large mirror aperture (8 – 16 m) and exceptional wavefront stability will provide unprecedented spatial resolution and ultra-high contrast coronagraphy.

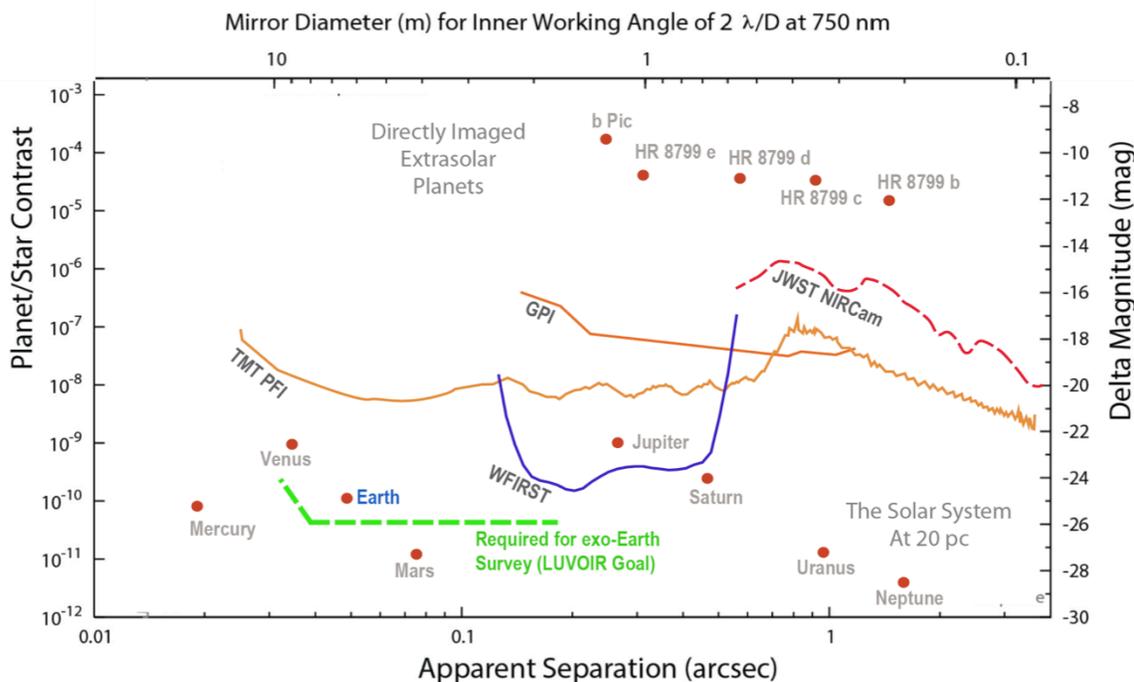
Broad wavelength coverage from the far-UV reaching into the near-infrared will permit revolutionary multi-wavelength studies.



**Limiting sensitivities** for some current and future facilities. LUVOIR values are computed assuming a 280K temperature and a range of telescope diameters (based on Dalcanton et al., 2015).



A UV-Optical-IR telescope with a large aperture will provide unprecedented **spatial resolution**, allowing high-resolution mapping of the surfaces of distant Solar System objects and galaxies at large distances.



**High Contrast Exoplanet Imaging:** Contrast limits for various current and future coronagraphs. Values for Solar System planets at 20 pc (lower part of plot) are shown for comparison to some currently imaged exoplanets (top part of the plot). The region above the dashed green line would be probed by LUVOIR. Adapted from Lawson et al. (2012) and Mawet et al. (2012).